

Claims

Sub A1
1. A method of transmitting user data in a TDMA system in which the number of channels is increased by partitioning at least one time-slot in a TDMA frame into at least two sub-time-slots.

5 2. The method of claim 1 in which each sub time-slot is allocated to a different user.

3. The method of claim 1 or claim 2 in which user data is transmitted in each time slot in a burst structure, user data being transmitted in each sub time-slot in a corresponding burst structure.

10 4. The method of claim 3 in which the user data is transmitted in each time slot in a burst structure having n bits and wherein each time slot is partitioned into m sub time slots, user data being transmitted in each sub time-slot in a corresponding burst structure having n/m bits.

15 5. The method of claim 3 or claim 4 in which the user data comprises speech, the burst structure being a GSM burst structure.

6. The method of any preceding claim in which the TDMA system is an EDGE packet switched network.

7. The method of any one of claims 1 to 6 in which the TDMA system is a wireless system, wherein in the up-link data from p users is encoded such that each forms $1/p$ of an RLC/MAC block, wherein the data from each user is encoded into a respective one of p sub-time-slots.

20 8. The method of claim 7 when dependent upon claim 6 wherein the RLC/MAC block is transmitted over four TDMA frames.

9. The method of any preceding claim wherein the user data is encoded 25 into an RLC/MAC block for transmission, the RLC/MAC block being transmitted in a sub-time-slot over a plurality of frames.

10. The method of any preceding claim in which user data associated with at least two users is encoded into a single RLC/MAC block, the portions

46

Sub
A2 > 3n
of the RLC/MAC block associated with respective users being transmitted in respective sub-time-slots.

Add
A3